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Before the Committee on Post Office and Civil Service
of the House of Representatives

ON H. R. 10480, INCORPORATING THE PRESIDENT'S
PROPOSALS FOR FEDERAL SALARY REFORM

May 23, 1962

MR. CHAIRMAN, AND MEMBERS OF THE COMMITTEE:

It is a pleasure to be with you this morning to discuss the provisions of H.R. 10480. Although the provisions of this Bill provide for a number of significant changes to improve and reform our salary practice, the most significant proposals are to revise the salary rates to make them more reasonably comparable with the rates of private enterprise for the same levels of work, and to provide for an annual review to keep these rates comparable.

The implications of this proposal are of vital importance to all agencies of the Federal Government. They are especially so for the major programs of the Government in scientific and technological research and development. With your permission I should like to outline, briefly, the nature of our national, civilian space program as it emphasizes the level of quality and competence required, and forms the context of our manpower requirements. We can then consider how specific provisions of this Bill will assist us in meeting certain of our national goals.

The hearings that led to the establishment of the national space program reflect a broad scope of inquiry and consideration. The magnitude and the complexity of the effort in space explorations and in technological development were outlined by the country's foremost scientists, engineers, industrial leaders, and spokesmen for major areas of public policy. There was clear recognition of the international implications and significance, and realization that the effort, if made, must be a major effort, and successful in its achievement. There was deep insight into the fundamental relationship between a nation's response and advance in science and technology and that nation's decline or advance in overall economic, political, and intellectual strength and vitality. There was frank admission that the program would require the most effective utilization of a wide variety and large proportion of the nation's scientific and engineering talents and capabilities; that it must be supported by funding in large scale; and that it would require commitment of major segments of our nation's industry to assure the successful and timely accomplishment of its objectives.

These broad considerations of public policy were brought to focus in the National Aeronautics and Space Act of 1958 -- A new agency should be established, responsible for effective planning and realization of the nation's civilian space program. It

should be civilian in character, and should assure cooperation with other nations and groups of nations in both the scientific and technological work and in the peaceful application of the results thereof.

Not stated explicitly in the declaration of policy and purposes in the Act, but very clear in the deliberations of the Congressional Committee was the expectation that this new agency, the NASA, should have the resources to exercise strong and effective leadership in this program. It would be expected to utilize the skills and resources of private enterprise and the wide-spread scientific and engineering talent in our universities and other specialized institutions. It would be expected to bring together the leaders in all related fields of science and technology to utilize the fullest range of experience, critical judgments, and competent advice from our nation's scientific and technological community.

But the policy was clear: The new agency should be able, in terms of the experience, skill, and general excellence of its staff, to exercise positive leadership in the definition and prosecution of the national space program; to make sound and controlling technical decisions; and to organize and manage the large-scale and diversified industrial enterprises that would be required.

Its research and space flight centers should have the capability, in their facilities and the quality of their trained and skilled manpower, to meet two broad objectives: First, to plan and carry out the research and pilot developments to explore new frontiers of knowledge, develop a body of tested principle and criteria for application in design and development, and assure that our technological competence would be maintained well ahead of our more immediate requirements for specific systems design and development. And second, through the quality, diversity, and technical excellence of the work done in their laboratories, to assure the continuous development of experienced individuals able to assume roles of leadership in the scientific fields, in the generation of new concepts and new approaches, and in the organization, management, and technical direction of projects and programs within the constantly broadening areas of aeronautical and space science and technology.

As you know, both the scale and the pace of the space program have been greatly accelerated in response to the President's recommendations of last Spring, which were approved by the Congress.

Our programs in the area of the meteorological and communication satellite applications, in the exploration of the

near-earth and space environments, and in manned space flight has been defined and are well underway. With the Department of Defense, we are progressing in the development of a series of increasingly more powerful launch vehicle systems required for these space flight missions. Our tracking and communication networks have been established, and the very important communication technology essential to guidance and control and to the acquisition and processing of data is being developed to meet the increasing complexity of these missions. And, our research and space flight centers have demonstrated the capability to provide the research and technological competence that is required.

This year the scope of the space program, in terms of dollar volume of contracted work, has been twice that of Fiscal Year 1961. And the scope of our program for Fiscal Year 1963 as proposed by the President is over twice that of the current year. This is a fourfold increase in volume within a period of two years. Such expansion of program has involved necessary increases in the number of key program and project leaders and other technical and managerial specialists required to plan and direct the operations involved. It has required increases in the centers to cover the broader variety of problems that must be attacked, more aggressively.

Composition of the workforce:

Let us turn now to the composition of the workforce which we have developed and are developing to carry out these programs and responsibilities. A summary of the growth of our staff is shown in Figure 1. In Figure 2 we have indicated the division of our personnel in terms of their location in the several Centers and the kinds of work done.

It will be noted that over one-third of our personnel are professional scientists and engineers on whose work and technical leadership the success of our programs depend. Another third are the skilled craftsmen and research mechanics and their supervisors whom we refer to as Wage Board employees. They are compensated on the basis of wage schedules which are revised annually to reflect prevailing locality rates.

The third group, approximating one-eighth of our staff, are the non-degree engineering and scientific technicians. In certain areas these technicians work closely with the professional staff, and often make a comparable contribution. Increasingly in industry these types of technicians are being compensated at rates approaching, and often equalling those paid to professional engineers.

The fourth group, accounting for one-sixth of our staff are the clerical and secretarial people.

The fifth, and numerically the smallest of the groups is that of our professional-level specialists in management, professional legal counsel, librarians, technical editors, and others. These, to perform their functions, require special competence in their respective areas such as contract negotiation, financial and personnel management, and the like, but they do not require comparable training and experience in engineering or the sciences. Although only one-sixteenth of our total staff fall in this category, they work in close association with the professional scientific staff, at corresponding levels of program responsibility, and there is a relative scarcity of such people who have had such administrative operating experience with research and development programs. It is essential therefore that we align them within our larger group of professional scientists and engineers for salary treatment.

Level of quality and competence required

This summary has emphasized our responsibility for effective technical leadership and achievement, both in the research and development programs conducted within our laboratories, and in the planning, direction, and control of work that is contracted to industry because of the scale of

facilities and manpower required. The decisions of these scientific and technical leaders determine the speed and the cost at which our national objectives are met: Their competence and wisdom will determine the extent of the benefits which are obtained from such large expenditures of public funds. Mistakes of judgment in a field as complicated as space technology can be unbelievably costly. To assure the necessary competence and leadership we must have not less than the best which the country has to offer in our top positions of scientific, engineering, and management. And those whom we seek to support these top leaders in positions of responsible leadership in the respective programs, projects, and research efforts must also meet high standards of technical competence and personal leadership; for their functions of planning and direction extend outward and bring them into responsible contact with the top levels of our scientific specialists, engineers, and industrial managers throughout this country and abroad. For these top leaders and technical specialists we cannot expect fully to meet the levels of compensation which they may attain or already have attained in private enterprise. They have, and will come to us for other considerations.

And among the most critical of these other considerations is the quality of the staff which these key men may have to support them. Here we are faced with the problem of attracting and retaining personnel of superior skill, initiative and demonstrated competence who can plan and carry out the technical and managerial projects involved. This requirement for high quality in technical competence and personal effectiveness is universal throughout our activities. In spite of the growing number of personnel in NASA, we are spread very thin in terms of the increasing volume of program load each employee is expected to carry. In the project team and in the management office, each man counts. We must have individuals who can grow and who will carry out their work with marked independence and sound judgment. The requirement for high quality in competence and personal effectiveness is therefore a universal one throughout our activities. The need to obtain these types of employees both at trainee and at mature levels is becoming progressively more critical to the success of Government programs in areas of scientific research and large scale technological enterprises. I cannot emphasize too strongly the importance of being able to offer salary inducement and treatment comparable to that offered in private enterprise if we are to attract and retain the promising college graduates and mature scientists, engineers and management specialists we must have to carry out this national space program.

The principle of comparability

As we consider this salary bill before us, therefore, we must face the fact that the Federal Government is committed to major enterprises where the highest levels of technical and managerial competence are required. The national aeronautics and space program is the basis for our continued advance in aeronautics, both military and civilian. It is the basis for accomplishments that will let friend and foe alike know that we will not accept the risks of a second-best position in space. There are of course other such programs, vital to our security and advance as a nation. It is important, then, that we consider the significance of the principles of salary comparability and salary alignment as embodied in H.R. 10480 in terms of what is required if we are to develop and maintain the quality of manpower needed for such large scale technical and scientific enterprises.

The principle of comparability stated in the first Section of the Bill (Sec. 102(b)), has three aspects which meet the general problem stated above: First, it recognizes that the Federal Government must be able to compete in the nation-wide labor market, where increasingly it must obtain its fair share of the highly skilled and competent in the different areas of the professions, technology, and management. Second, it involves

frank recognition that there is a serious lag in the present salaries in the upper grades, and that the rates for these grades must be adjusted upward, if we are to have reasonable comparability. The increases are substantial, but not unrealistic. And, third, it requires that there shall be an annual review of salary rates outside the Government, to determine whether salary adjustments are needed, and how much change is warranted, so that the Federal salaries may be kept in proper alignment with those outside.

This third aspect of the policy, that of annual review and adjustment to achieve continued comparability, is the most significant in my opinion. For it overcomes one of the greatest problems that we have encountered: the general attitude among the better college graduates and their faculty advisors, and among those in industry whom we seek to recruit, that the Federal Government pays far below the norm, and has no mechanism for timing its adjustments to advancing salary trends. Adoption of the above principle would silence this type of criticism. It would bring the Federal Government forward, in its competitive position, to the place where factors other than salary would become the true basis of choice by prospective employees. And, in these respects, many Government careers can have a strong attraction in the opportunities they offer to patriotically serve the nation, in the challenges they offer, the opportunities

they afford for personal growth and widespread recognition, the laboratory facilities required to solve the most complex problems, and the conditions of work. The revised salary rates proposed in this Bill are needed. But more significant is the statement of intent that once we have caught up in the three-year period of phased adjustment, we will try to stay on a comparable basis with private enterprise. The impact of this on those who might then be attracted is very important.

As you know, it has been my privilege to serve the Federal Government for 3 years as Under Secretary of State, and for 3 years as Director of the Bureau of the Budget, in addition to the experience I have had as Administrator of the NASA. And, I have also over the years accumulated extensive experience at the level of general management in industry. I have, therefore, been in a position to study this salary problem from many angles. And, in the building and maintaining of a key staff, whether in Government or industry, I have learned to appreciate the necessity for a compensation system that builds confidence among these key employees and those whom they wish to bring with them that they will receive equitable salary treatment.

In both Government and industry I have known and worked closely with men and women of exceptional scientific, engineering, and management talent and executive ability. In both Government and industry the response of specially competent men and women to new challenges, their enthusiasm, their satisfaction in tackling big jobs and doing them well, are much alike. And in both industry and government there is a broad range of varying competence among those from whom a choice must be made for difficult and exacting assignments. But in industry there is a far broader range in the salary structure to recognize and reward success in such assignments. Today, more than ever, this is the heart of our problem in Government salary administration: That we have the same requirements for competence and for concrete, unambiguous incentives to talented employees to constantly increase their competence, but we have not thus far recognized this in our salary structure as does industry.

Another, and very important aspect of the problem is that just as we have a national market for industrial products and services, we also have a national market in which we must seek highly skilled and competent employees. More and more throughout the nation the distinctions between those in government and those in industry are disappearing. Those in government work closely with their counterparts in many non-governmental

areas of scientific research, technological development, and management; they know each other's stature and respective excellence; and, frankly, they are keenly aware of the relative salary levels which each has attained. As our different, essential Government activities increase in scope and technical complexity, a corresponding number of these highly skilled and competent individuals must be recruited and retained. But, because of the marked difference in the salaries paid such people by Government, as compared with other employers, far too often the role of Government has been to serve as a training ground, providing experience and contacts for those who cannot be retained by present salary levels. We cannot permit the present rate of "graduation" of the most skilled and competent into higher paying jobs. This not only makes it impossible to attain maximum effectiveness in many technical areas, but adds greatly to the cost and to the risk of too low a level of performance in critical technical systems.

But we must go farther than merely adjusting the salary schedule to overcome the serious lag that has developed. We must establish confidence among our employees in their long-range future as they advance in their career of public service. In this regard permit me again to cite the practice of industry. In industry, salary administration is based on

the principle of comparability. Individuals are aligned in comparison with their fellow workers. There are carefully considered distinctions in the salary rates paid to respective individuals; and distinctions in the rates at which certain individuals are advanced. But there are few big "leaps" in corporate salary schedules. Adjustments are made on the basis of industry to industry comparisons, and in recent years the number of pooled studies have increased in which member industries share their own salary information in order to obtain a broad perspective as to salaries paid by others for comparable kinds and levels of work.

Behind this periodic salary review are two very practical concerns: Each industry is concerned that it does not fall behind its competitors, so as to invite loss of its staff because of marked discrepancies in pay. Second, and equally or more important, every industry is concerned to maintain the confidence of its own people in their long-range future, their assurance that they may expect to advance in income as their levels of contribution increase, and that they may expect a level of income that is generally in line with their particular skill and level of experience. This trust by the employee, his sense of equitable salary treatment is one of the major morale factors in any group in industry.

The Federal Government cannot carry out the vital enterprises to which it is committed unless it, also, realizes that it must draw heavily from the ranks of the especially skilled and competent and that, to hold them it must establish and maintain their confidence that they will continue to receive compensation comparable to that of their counterparts and colleagues in industry.

Senior government officials and career employees have for some years looked forward to a review and revision of the broad policy underlying the present questions of Federal pay, which are now before the Congress in this Bill. There has been a mounting concern among the more competent scientists, engineers, and executive personnel who have "held-on" in spite of their knowledge that they could earn more outside.

Thus the action taken on this Bill with respect to the principle of comparability and the provisions for annual review and adjustment will have far more significance in making or in breaking this essential general confidence, than would be true were we confining our concern to a routine pay increase bill.

I cannot, therefore, over emphasize the seriousness of this matter --its significance for the role of Government in planning, directing, and exercising effective leadership in the many major enterprises requiring top level personnel.

The NASA program happens to be one of the largest in the area of advanced technology. But, it is not unique. Throughout the Government there are specialized personnel, executive personnel, and management specialists who are highly skilled and competent and who are the equals of any who can be found outside Government. All that I have said, therefore, I have considered in terms of the general situation as it affects our different, and major Government enterprises.

Personnel with superior skill, initiative, and demonstrated competence are increasingly required for these enterprises. To attract and retain the promising college graduates and the mature individuals with such competence, we must be able to offer salary inducements and treatment that are reasonably comparable to that offered by private enterprise.

I wish to thank you for the privilege of making this detailed presentation. I shall be pleased to answer such questions as you may wish to ask. Thank you.

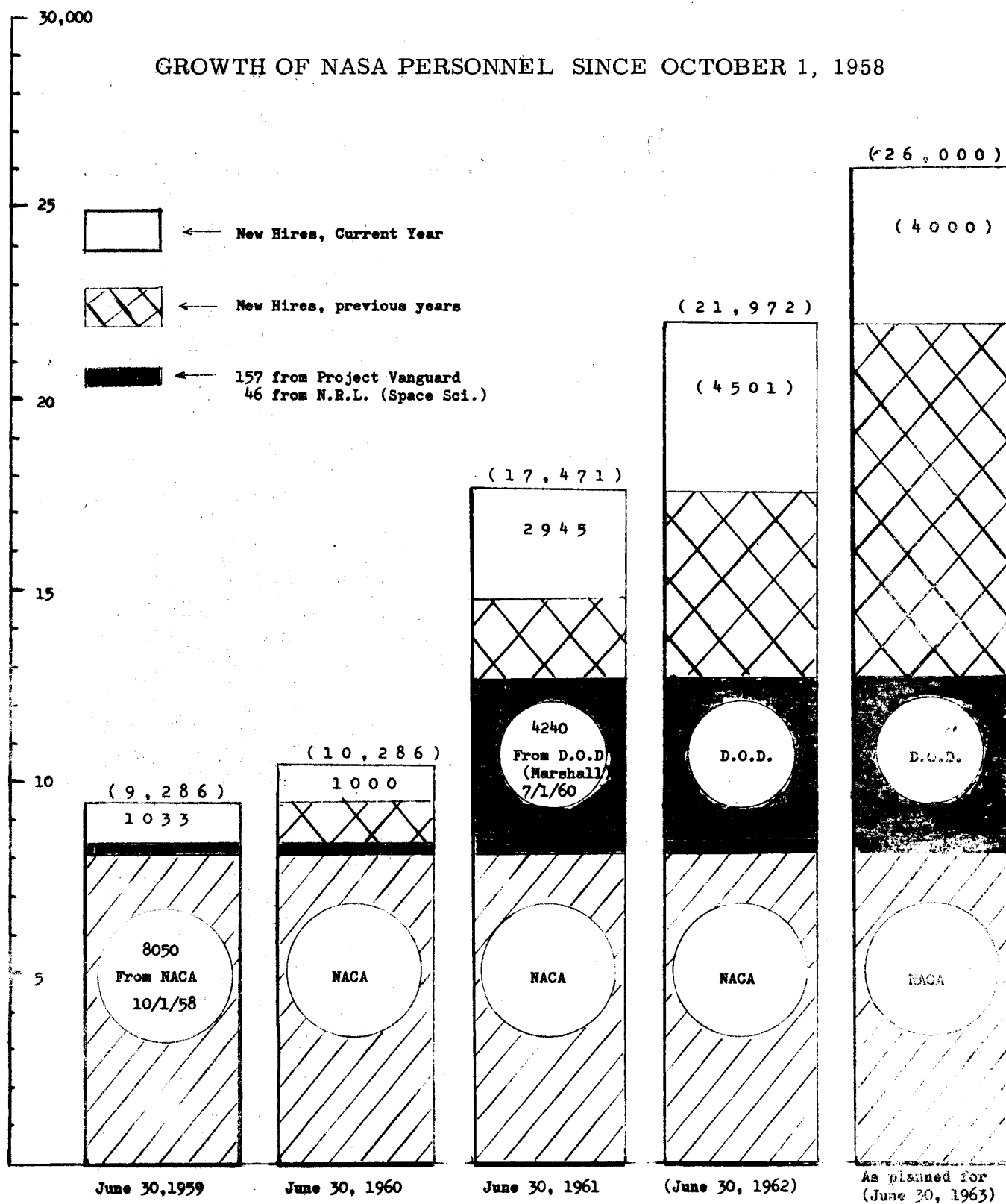


FIGURE 1

DISTRIBUTION OF NASA PERSONNEL

As of March 31, 1962

KIND OF WORK LOCATION	Eng'rs & Sci.	Wage Board	Tech- nicians	Clerks & Secy's	Admin. Spec.	TOTAL	Pct.
Headquarters	297	19	17	487	377	1197	5.7
Langley Research Center	1225	1535	385	353	118	3616	17.3
Ames Research Center	523	672	183	160	50	1588	7.6
Lewis Research Center	1219	1577	307	285	105	3493	16.7
Flight Research Center	255	254	33	47	18	498	2.4
Goddard Space Flt. Center	897	211	386	457	214	2165	10.3
Manned Spacecraft Center	619	215	111	365	148	1458	7.0
Marshall Space Flt. Center	2063	1724	1028	1074	516	6405	30.5
Wallops Station	51	218	45	69	15	398	1.9
Western Operations Office	23	0	2	46	33	104	0.5
Space Nuclear Propulsion Off.	20	0	0	6	2	28	0.1
TOTALS:	7083	6425	2497	3349	1596	20,950	100.0
Percent:	33.8	30.7	11.9	16.0	7.6	100.0	

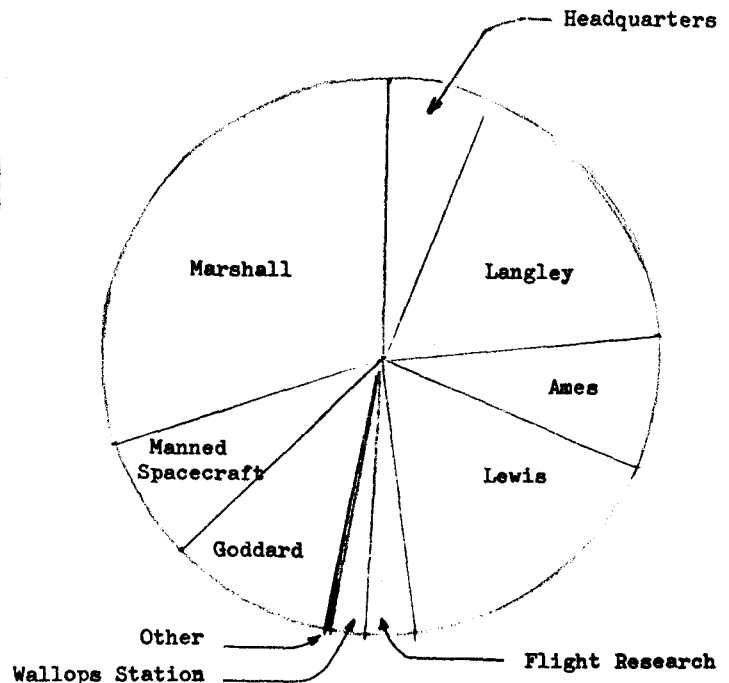
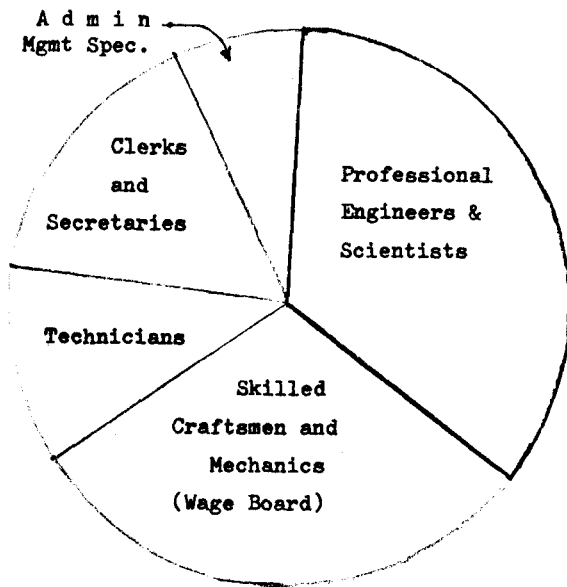


FIGURE 2